

What is claimed is:

1. A method of reducing carbon monoxide concentration of mixed gas containing hydrogen, carbon monoxide and oxygen, comprising:

5 preparing a carbon monoxide removing device having a carbon monoxide concentration reducing catalyst in which a transition metal element is included and a carbon monoxide adsorption amount is adjusted from 0.1 to 3 mL/cat.g; and

supplying the mixed gas to the carbon monoxide removing device at a space velocity of 15000 to 300000 h⁻¹ and a temperature of 100 to 300 °C.

10 2. A method of reducing carbon monoxide concentration according to claim 1,

wherein the carbon monoxide concentration in the mixed gas is 0.1 to 2 vol% and oxygen concentration in the mixed gas is 0.5 to 1.5 molar times the carbon monoxide concentration.

15

3. A method of reducing carbon monoxide concentration according to claim 1,

wherein the carbon monoxide concentration reducing catalyst contains at least one element selected from the group consisting of iron, cobalt, nickel, copper, 20 and manganese as the transition metal element which is a first component, and

the carbon monoxide concentration reducing catalyst contains a second component, and a contained amount of the second component is 0.05 to 0.2 molar times a contained amount of the first component.

25 4. A method of reducing carbon monoxide concentration according to claim 3,

wherein the second component is a noble metal element.

30 5. A method of reducing carbon monoxide concentration according to claim 4,

wherein the noble metal element is at least one element selected from the group consisting of platinum, ruthenium and rhodium.

6. A method of reducing carbon monoxide concentration according to claim
5 3,
wherein the second component is a rare-earth element.
7. A method of reducing carbon monoxide concentration according to claim
6,
10 wherein the rare-earth element is at least one element selected from the group consisting of lanthanum, neodymium, cerium and praseodymium.
8. A method of reducing carbon monoxide concentration according to claim
3,
15 wherein the carbon monoxide concentration reducing catalyst is a monolithic catalyst, and the contained amount of the second component is 2g or less per liter of the monolithic catalyst.
9. A method of reducing carbon monoxide concentration according to claim
20 1,
wherein the mixed gas is reformed gas obtained by reforming a fuel containing a hydrocarbon.
10. A method of reducing carbon monoxide concentration according to claim
25 1,
wherein the mixed gas includes exhaust gas of an internal combustion engine.